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EASTMAN KODAK COMPANY

ROCHESTER 4, N.Y.

PLEASE PRINT NAME
RESEARCH LABORATORY

June 23, 1959

STATINTL

Jr.

STATINTL

Dear Mr. [REDACTED]

STATINTL

In reply to your letter of June 11, 1959, to Mr. R. G. [REDACTED] we are enclosing some of the data you requested on Kodak Plus-X Aerecon Film (Thin Base) and SO-221 and SO-243 Aerial Negative Films. These materials have Daylight Exposure Indexes of 64, 6 and approximately 1, respectively. The Plus-X Aerecon Film and SO-221 are thin acetate base materials, but SO-243 has a gray acetate support of normal thickness. Recommended development in D-19 for these three films is 8 minutes at 68°F.

How determined?
MDR
6 Jul 59

why? or what basis

The enclosed data includes the following:

- 1) Characteristic curves of each film for development in D-19.
- 2) Sine wave response curves. ^{① considering "identicality" of 221 & 243} why would anyone use 221? ^{Grain & Gamma}
- 3) Maximum resolving power of each film at contrast ratios of 2:1 and 1.25:1. ^{② what development?}
- 4) Spectral sensitivity curves.
- 5) Granularity-density curves for Plus-X Aerecon and SO-221 films. ^{What size aperture? n.a. of microscope? What development?}

Curves of low contrast resolving power as a function of exposure are not available. The granularity-density data for SO-243 is being obtained. We shall forward this curve to you when our tests are completed.

The data enclosed represent average characteristics of these materials as measured by standard procedures in the Kodak Research Laboratories. Particular samples may exhibit

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-2-

June 25, 1959

slight variations. Also, because of improvements which are made from time to time in all sensitized products, sometimes without announcement, these data may not describe the characteristics of similarly identified material manufactured in the future. When precise quantitative data are needed, therefore, measurements should be made under the actual conditions of the intended application.

Very truly yours,

STATINTL

Research Laboratories

[REDACTED] :bsl

Enc.

Maximum Resolving Powers

*How long?
not blue*

Developer

Contrast Ratio

2/1 T 1.26/1 T

M:

M:

Film

Plus-X Aerecon

D-19

.13

.55

.38

.10

.30

.65

SO-221

D-19

.08

.95

.24

.05

.60

.42

SO-243

D-19

.14

.160

.43

.10

.90

.56

23 = Mo

115 = Mo

$\sigma_{0.05} = .05$
 $\sigma_{0.10} = .10$
MEAS

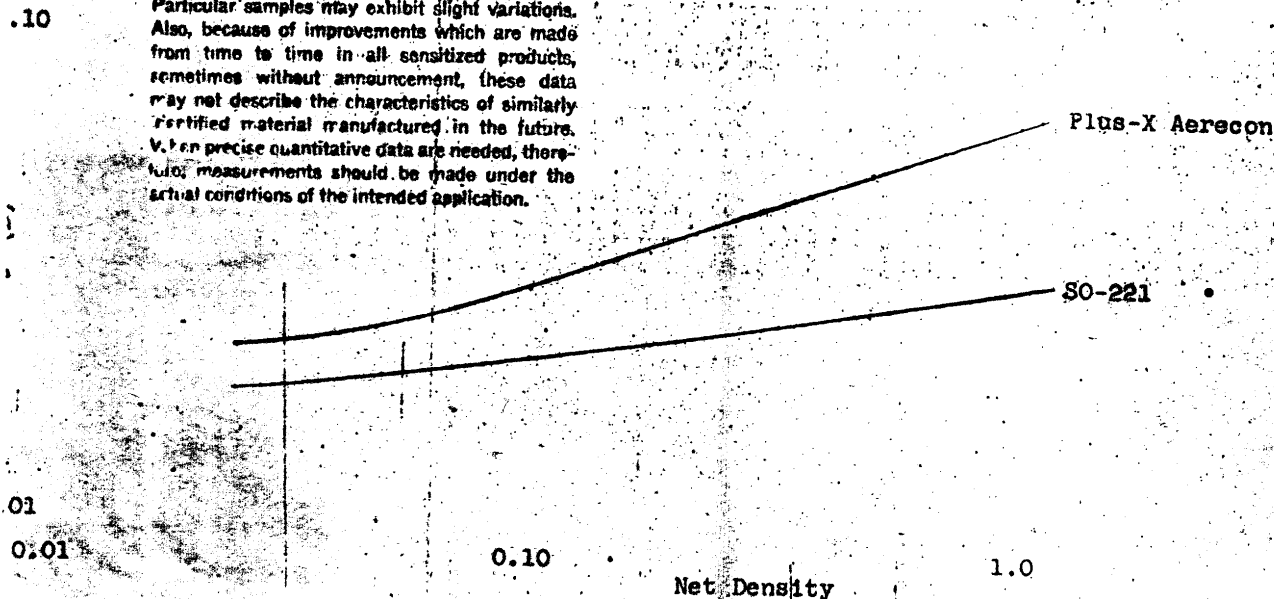
$\sigma_{0.025} = .025$
 $\sigma_{0.035} = .035$
MEAS

MDE
7 July 1959

1.0

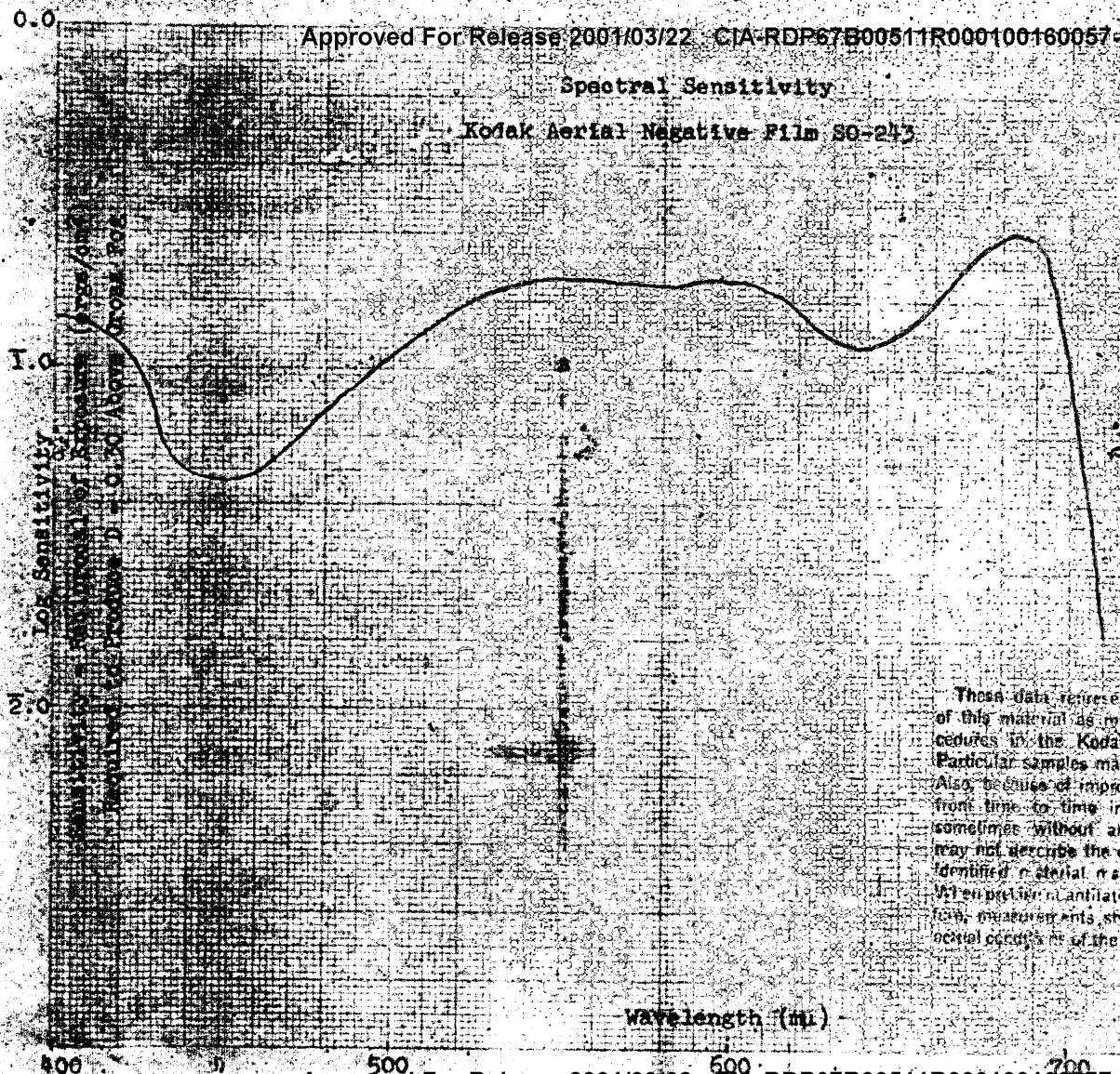
Granularity
(D) versus net Density

These data represent average characteristics of this material as measured by standard procedures in the Kodak Research Laboratories. Particular samples may exhibit slight variations. Also, because of improvements which are made from time to time in all sensitized products, sometimes without announcement, these data may not describe the characteristics of similarly certified material manufactured in the future. For precise quantitative data are needed, therefore, measurements should be made under the actual conditions of the intended application.

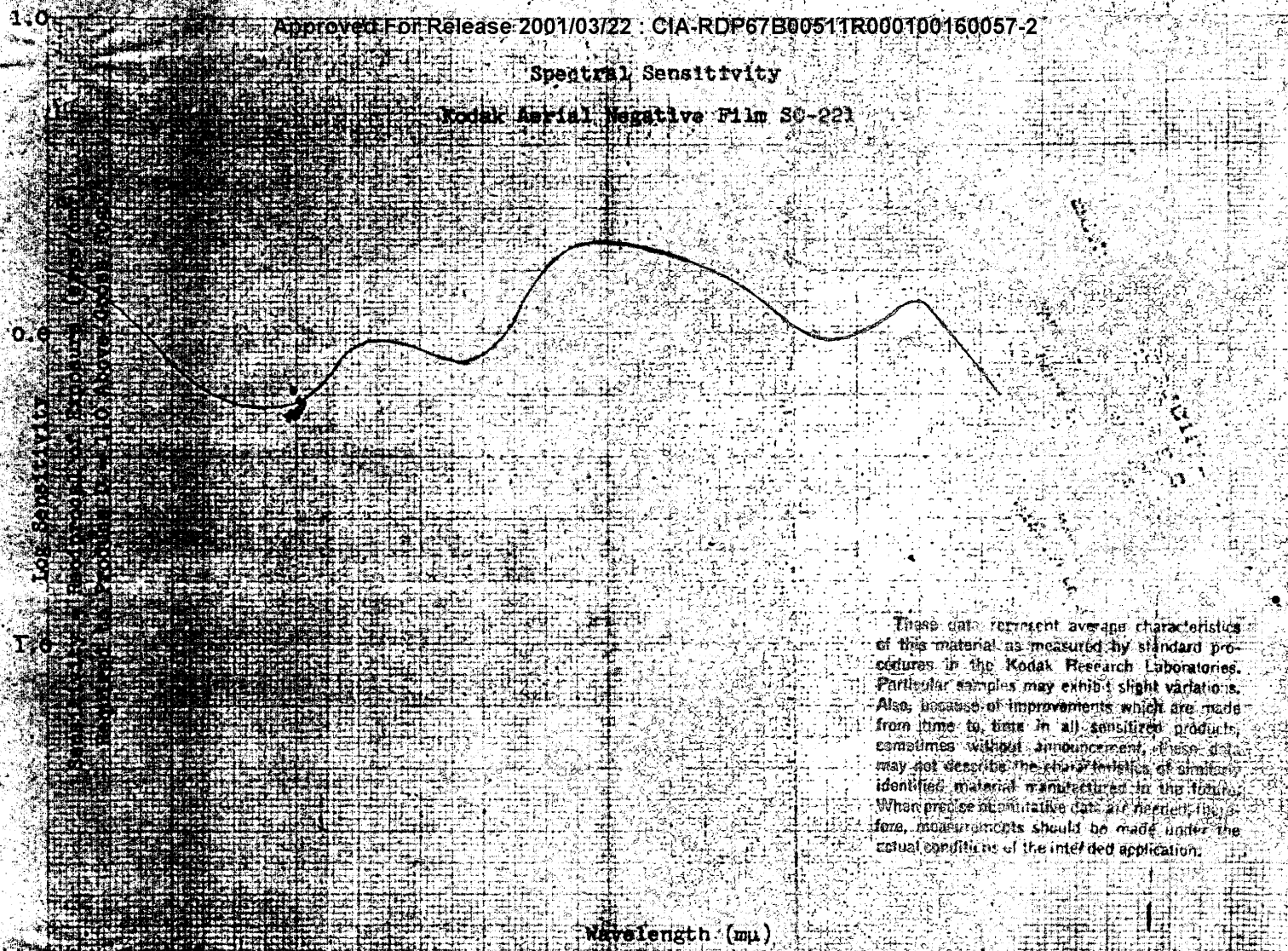


Spectral Sensitivity

Kodak Aerial Negative Film SO-243



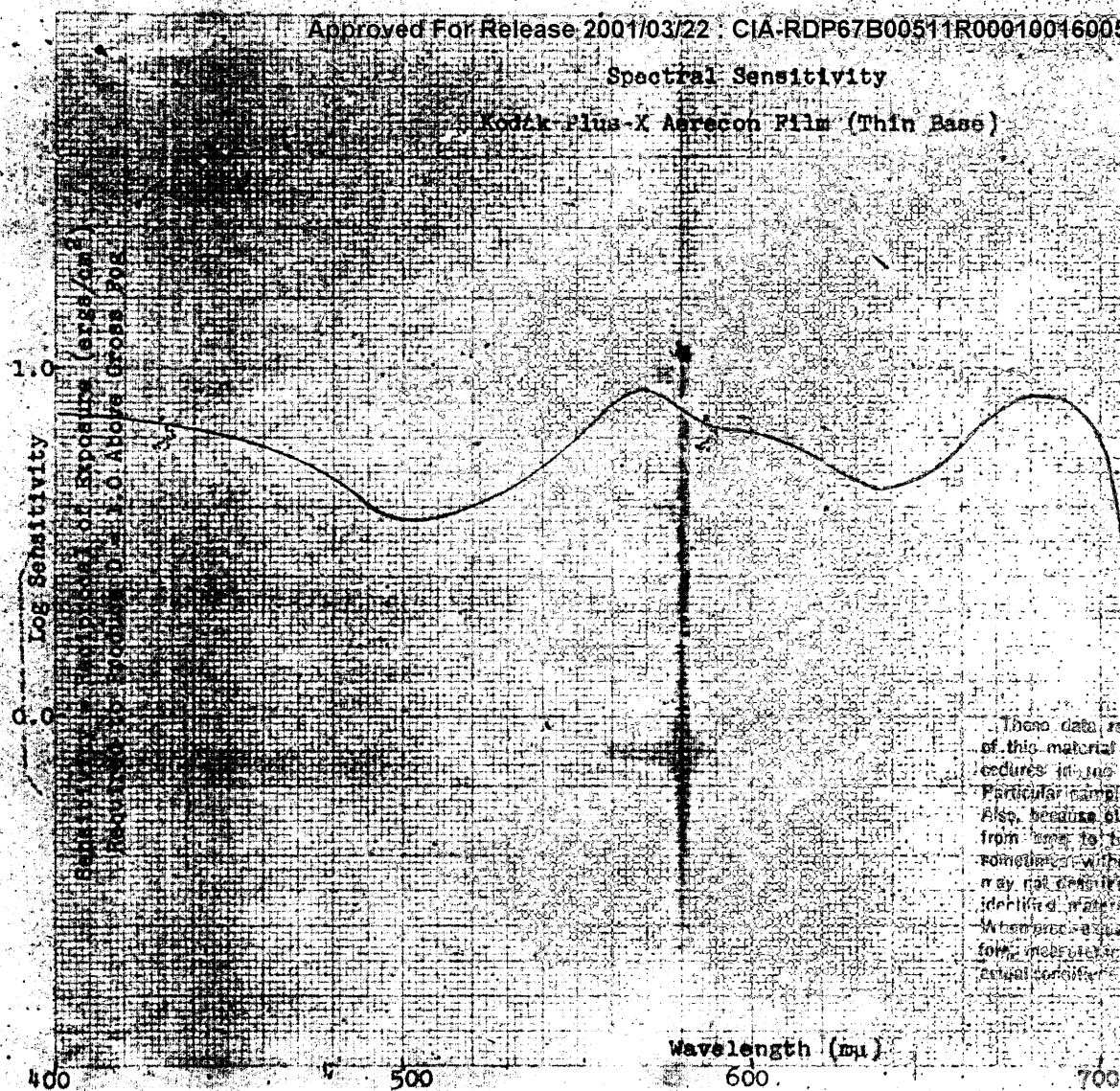
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These data represent average characteristics of this material as measured by standard procedures in the Kodak Research Laboratories. Particular samples may exhibit slight variations. Also, because of improvements which are made from time to time in all sensitized products, sometimes without announcement, these data may not describe the characteristics of similarly identified material manufactured in the future. When precise quantitative data are needed, therefore, measurements should be made under the actual conditions of the intended application.

Spectral Sensitivity

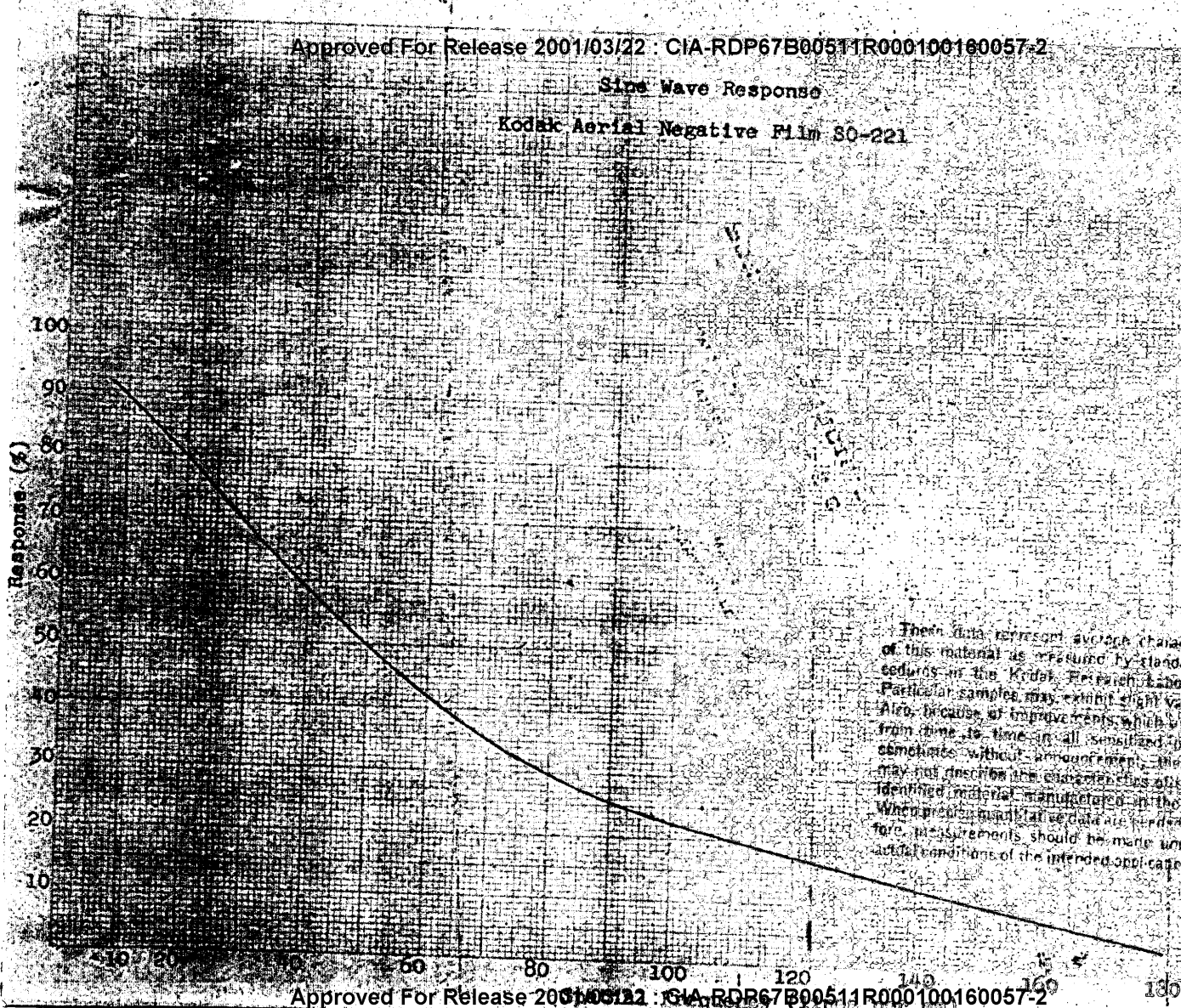
Kodak Plus-X Aerocon Film (Thin Base)



These data represent average characteristics of this material as measured by standard procedures in the Kodak Research Laboratories. Particular samples may exhibit slight variations. Also, because of improvements which are made from time to time in all sensitized products, some changes without announcement, these data may not be representative of characteristics of similarly identified material manufactured in the future. When precise quantitative data are needed, therefore, measurements should be made under the actual conditions of the intended application.

Sine Wave Response

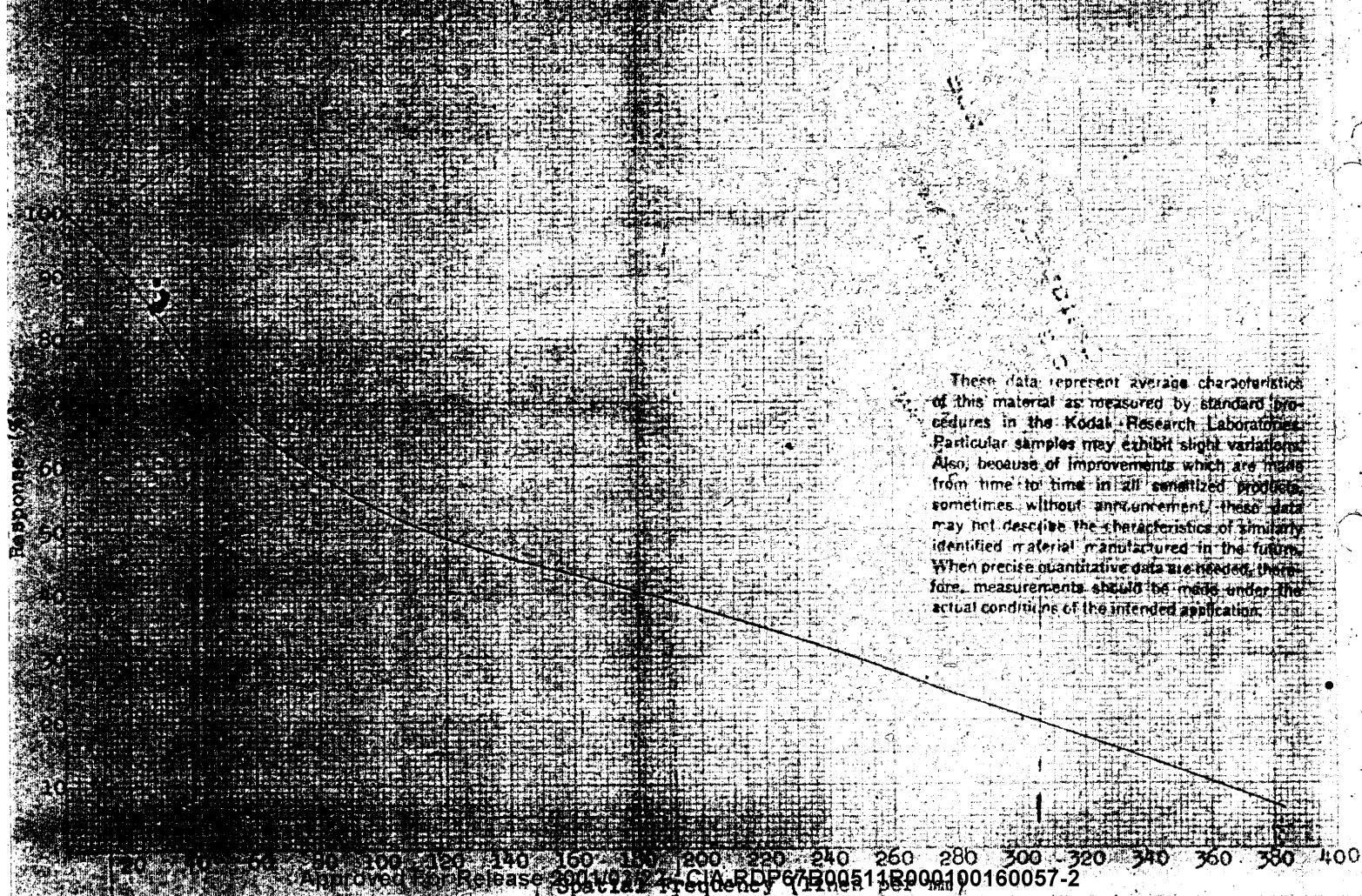
Kodak Aerial Negative Film 30-221



This data represents average characteristics of this material as measured by standard procedures in the Kodak Research Laboratories. Particular samples may exhibit slight variations. Also, because of improvements which may be made from time to time in all sensitized products, coincidence without announcement, these data may not describe the characteristics of similarly identified material manufactured in the future. When precise quantitative data are needed, therefore, measurements should be made under the actual conditions of the intended application.

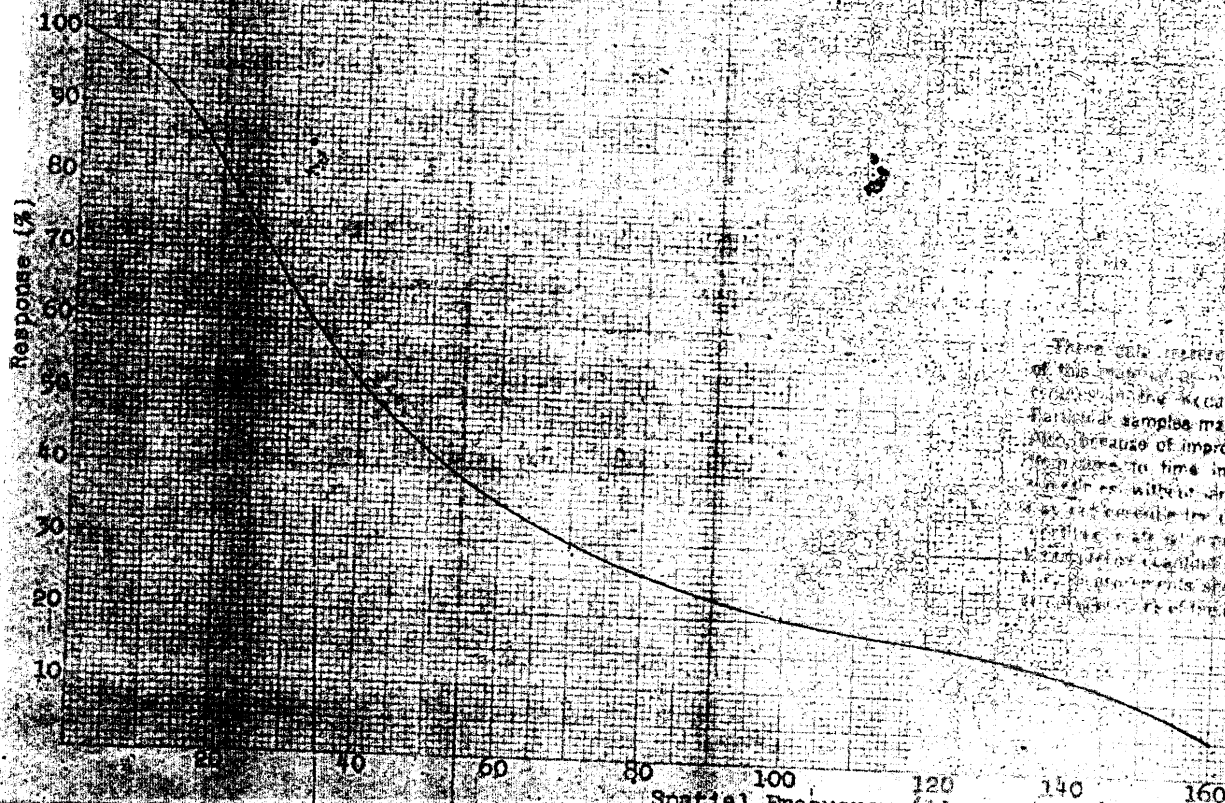
Sine Wave Response

Kodak Aerial Negative Film SO-243



Sine Wave Response

Kodak Plus-X Reason Film (Thin Base)



These data represent average characteristics of this material as measured by standard procedures in the Kodak Research Laboratories. Particular samples may exhibit slight variations. Also, because of improvements which are made from time to time in all sensitized products, these data, without announcement, these data may not exactly be the characteristics of similarly produced material in the future. For comparative data on other data, there should be made under the conditions of the intended application.

Developed in D-19, 68°F

800

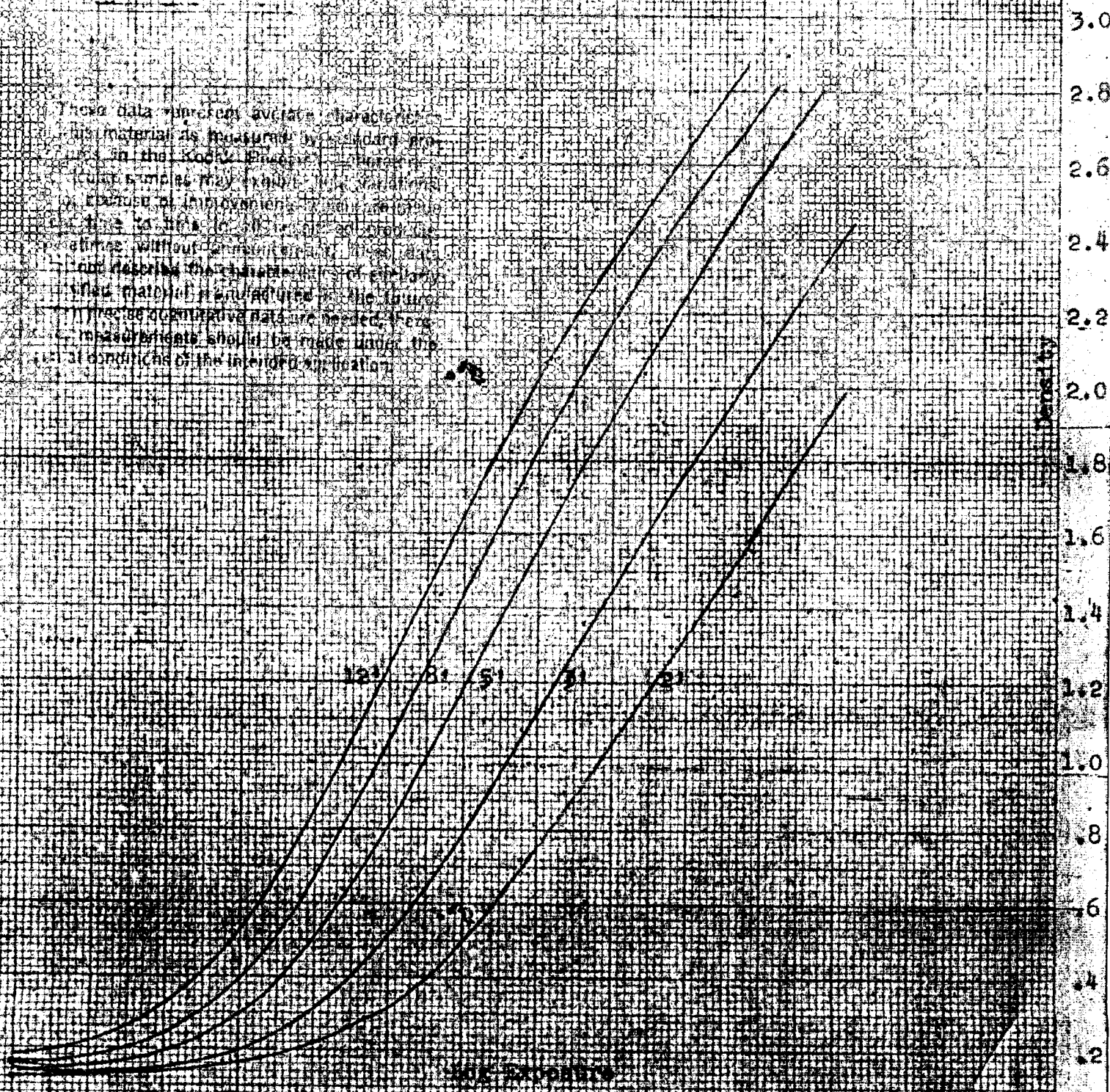
Density

2.0

Exposed to Sunlight
plus Wessman 212 filter

Developed in D-19, 68°F

These data represent average characteristics of material as measured by standard procedures in the Kodak Photo Process. Individual samples may exhibit variations due to imperfections in the material or to the method of exposure. These data are intended to provide a general guide to the selection of exposure times without the aid of a densitometer. For more detailed data on the characteristics of the material, the manufacturer's data should be consulted. These data should be made under the conditions of the intended application.



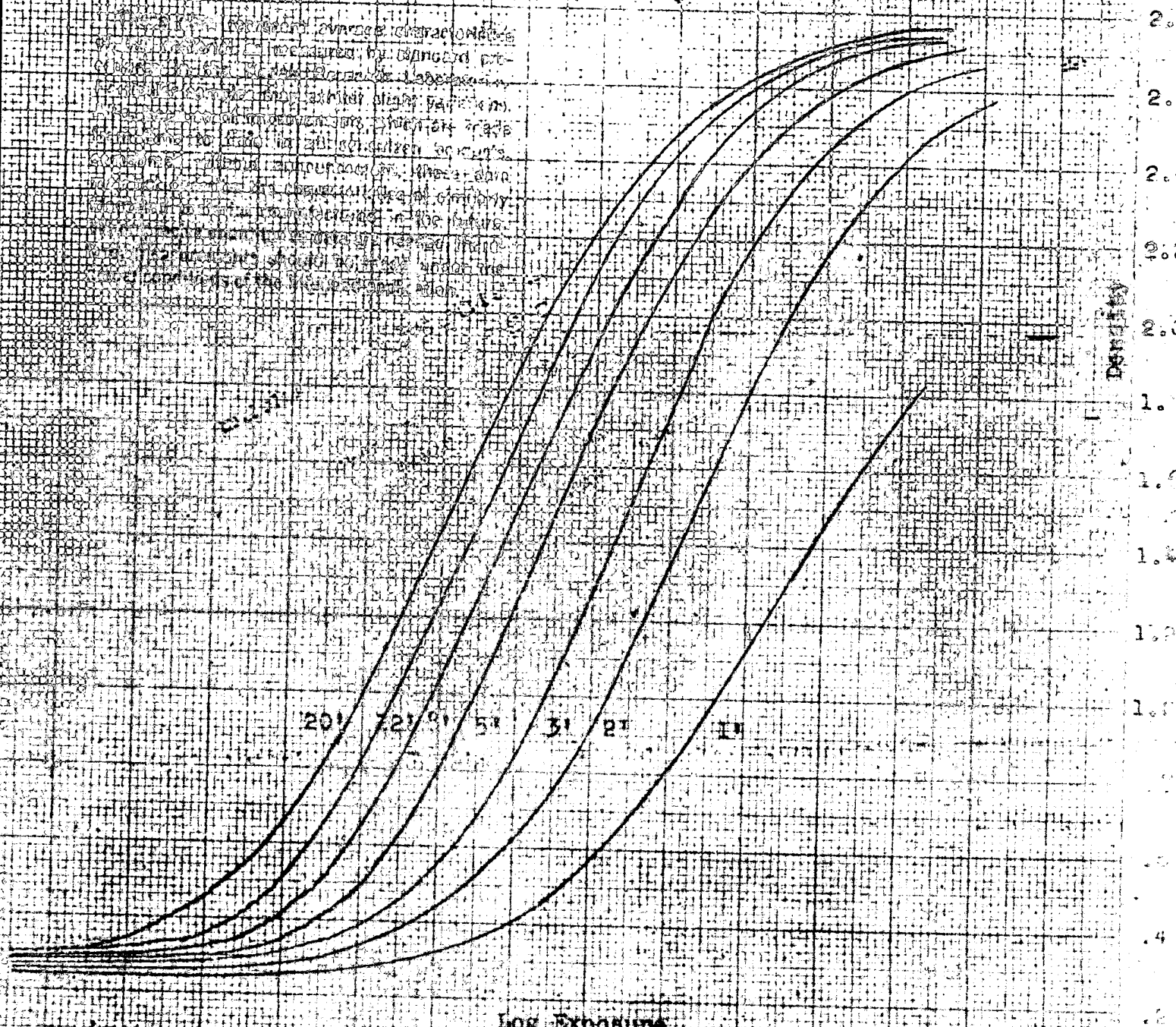
SS-243

Exposed to Sunlight

as Written and

Developed in D-19, 60°

The curves shown in this graph are typical of the response of the film to light exposure. The curves are plotted on a log-log scale, with the horizontal axis representing the logarithm of exposure and the vertical axis representing the logarithm of density. The curves are labeled with numbers 1 through 6, indicating different exposure levels. The curves show that the density increases with exposure, and the rate of increase is higher for higher exposure levels. The curves are also shifted to the right, indicating that the film has a certain level of exposure before it begins to respond.



1.0